KPMG Peat Marwick Stevenson & Kellogg
Management Consultants

Peat Marwick Thorne
Chartered Accountants

Project Report

BRITISH COLUMBIA FINANCIAL REVIEW:
THE ISSUE OF TREASURY FUNCTION

February 27, 1992

92-03896/

Contents

Executive Summary i

A. An overview: The treasury function in the government 1

1. Provincial Treasury 1

2. Crown corporations and agencies 2

B. Scope of our review 2

C. Findings and conclusions 3

1. Managing and controlling financial risk 3

2. Achieving desired operating results 6

3. Special issues regarding pension funds 13

4. Making the best use of the government's Treasury capabilities 14

5. Capacity constraints 15

D. Summary of Recommendations 17

Managing and Controlling Financial Risk 17

Achieving desired operating results 18

Making the best use of the government's Treasury capabilities 19

Capacity Constraints 19

Executive Summary—Treasury Function

This report evaluates provincial government activities related to borrowing, investing, banking and cash management. It concludes that the increase in the provincial deficit placed increasing demands on the treasury function to place debt at the lowest cost to the province. While the Treasury undertook a number of successful initiatives aimed at reducing borrowing costs, it did not use more aggressive derivatives in debt management because of limitations in resources. The lack of resources makes high performance difficult and increases risks. As a consequence, debt costs have been higher than they would have been.

The report recommends that:

- Staffing systems and risk management resources of Treasury be increased.
- The treasury functions of the main Crown agencies be consolidated in the Ministry of Finance and Corporate Relations, after suitable study.
- Greater use be made of more sophisticated techniques to manage the central aspects of the treasury function.

The Issue of Treasury Function

A. An overview: The treasury function in the government

Four branches within the provincial Treasury in the Ministry of Finance and Corporate Relations undertake most treasury services for the government, although certain Crown corporations and agencies such as B.C. Hydro, Workers' Compensation Board and ICBC perform some of these activities internally. The treasury function includes such activities as borrowing, investing, banking, cash management and loan administration.

1. Provincial Treasury

The Province borrows funds in both domestic and global markets. The Debt Management Branch in the provincial Treasury is responsible for structuring, documenting and executing debt issues and related derivative products for the government. Its mandate, through the Fiscal Agency Agreement, is to act as the funding and financing agent for the province. To sustain a high level of interest in the Province's bonds, the branch recognizes its need for strong investor relations in Canada and globally. The branch uses investment dealers in Canada, the USA, Europe and Asia to ensure that a broad investment community recognizes the Province's economic strength and reputation (high credit rating) and to facilitate ready acceptance of its paper.

The Investment Branch is accountable to government for maximizing returns on sinking and other non-trusteed funds. In addition, the branch performs a fiduciary role, on behalf of beneficiaries and the Superannuation Commissioner, who is the trustee, for the six major pension funds. In 1989, the branch began diversifying its investment portfolio from money market and fixed income securities into equities (Canadian and foreign), mortgages and real estate. The branch has portfolio managers managing each type of product, and has retained external investment managers to manage its foreign investments and the active domestic component of the portfolios.

The Banking and Cash Management Branch is responsible for overall cash management, payments, revenue collections and coordinating bank relationships and bank tenders for the government, its agencies and Crown corporations.

The Loan Administration Branch is responsible for administration of loans after they are approved. The branch is not involved in reviewing loans from a credit perspective, prior to approval, but does review them from an administrative perspective on receipt of the file. After processing the loans, the branch monitors compliance with terms and conditions and is responsible for enforcing compliance and collecting from defaulting clients.

2. Crown corporations and agencies

Several Crown corporations maintain aspects of the treasury function within their organizations.

B.C. Hydro determines with Treasury its borrowing strategy, has staff to perform the analysis needed to support that strategy, and executes their debt placement through Treasury. Hydro is also examining ways of hedging its commodity exposures in oil and gas.

The Workers' Compensation Board and ICBC maintain investment management functions for the premiums which their organizations receive. They establish portfolio management objectives and strategies, and invest their funds.

B.C. Transit is planning to hire a person in the treasury area to focus on improving cash flow management as well as analyzing and recommending the timing and amounts of Transit's debt requirements. The position is intended to complement the activities currently performed for Transit by Treasury.

B. Scope of our review

We conducted our review of the treasury function by interviewing, in the Ministry of Finance, the Deputy Minister (the former ADM), four branch directors, and selected managers. We considered the applicable legislation, agreements and contractual arrangements and the statutes for each pension fund. Within Treasury, we analyzed current plans, policies, procedures, performance measures, management reports, and internal controls. We also interviewed the Chief Financial Officer and Treasurer of B.C. Hydro, the Acting Treasurer of Workers' Compensation Board, and the Vice President, Treasury and Investments of ICBC.

During our review we focussed on issues relating to financial risk, including unfunded liabilities, foreign currency and interest rate exposures, and expenditures on essential additional resources. We sought to identify areas where efficiency and effectiveness could be improved. We also attempted to identify actions which could be taken to enhance revenues and yields on investments and to reduce borrowing and operating costs at acceptable risk.

C. Findings and conclusions

Treasury operations must cope with accelerating change—new risk management practices, different financing requirements, a growing range of possible investments and the increasing need for sophisticated technology. We believe that the Provincial Treasury is being well managed by knowledgeable and experienced directors. Overall, the returns achieved by Treasury in the Management of the province's investments and debt are quite satisfactory. To date, management have coped as best they could with the finite resources available to them. Their need for additional resources is, however, increasingly desperate, and must be addressed before treasury performance falters.

Management recognizes their need to supplement existing policies, procedures, performance measures and management reports to properly manage and control risks. We found that Treasury had initiatives underway to address many of the issues identified in this report. The potential problems which they face are serious, and their efforts require much stronger support than has been received in the past.

1. Managing and controlling financial risk

a) Use of derivative products in debt management to reduce debt costs

Derivative treasury products are widely used in debt management by most financial institutions, large corporations and other provincial governments and their agencies. The large number of players in the marketplace and the legal, regulatory and accounting requirements imposed on these products generally allow for a liquid, efficient and controlled marketplace. Problems or concerns about the use of these products typically result from either a lack of knowledge about the products, or inadequate internal controls (e.g., policies, procedures, systems) within an institution.

Treasury makes limited use of swaps, swaptions, and forward rate agreements (derivative products) to protect the debt portfolio from adverse interest rate or foreign currency movements. Using such products can help to reduce the cost of funds to the government and clients such as B.C. Hydro and WCB. Reports provided by external consultants (Salomon Brothers, Price Waterhouse) have indicated that the B.C. Hydro portfolio, which includes most of the derivative products used by the government, is prudent and relatively risk neutral.

Treasury does not use certain derivative products, such as futures, caps and floors, because it lacks both the resources to monitor markets and the necessary systems capabilities. As a result, the province misses opportunities to reduce its borrowing costs.

By using derivative products more often, Treasury could reduce the Province's cost of funds. The Province requires up to $4.5 billion dollars of debt on an annual basis. The size of this debt offering means that all of this funding cannot be obtained when the interest rates are perceived to be at their lowest levels.

Treasury must therefore bring issues to market on a regular basis throughout the year in order to service all financial requirements. The negative impact of increased borrowing requirements by a large number of borrowers in the next year could be lessened through the careful application of derivative products in the debt portfolio.

Before Treasury can take advantage of the full range of derivative products, additional personnel and systems resources are required to ensure that the transactions can be efficiently and effectively monitored and controlled. Treasury has begun the process of updating the documentation of policies and procedures for existing and new derivative products. An appropriate software system is also needed, either through enhancements to currently installed systems or the purchase of a comprehensive package system.

Despite the substantial increase in debt since 1988/89, Treasury has not been able to minimize provincial interest costs through the use of more sophisticated risk management techniques. As a consequence, debt costs have been higher than they could have been.

b) Use of derivative products in investment management

Investment managers have been slower than debt managers to embrace the use of derivative products. Suppliers of the products first focussed their marketing efforts on liability managers, because over the last three years the benefits of minimizing costs and risks were readily realizable through the use of swaps, options and forward rate agreements. In an environment of lower yields, however, major investment managers are turning to derivative products. For example, the investment managers of the Teachers' Pension Fund in Ontario have obtained the mandate to use derivatives with that fund.

Investment managers use derivatives to increase yields at lower risk. In the investment area, managers can select a variety of interest rate and foreign currency risk management products, including swaps, futures, forward rate agreements and options. For example, portfolio managers may enter short term money market investments, and hedge exposures using either futures or forward rate agreements (the futures equivalent in private markets). These products enable the manager to extend the benefit of higher yields without changing the nature and form of the underlying investment. One risk in buying such derivative products is that of seller default. Treasury can minimize this risk by buying derivatives only from highly rated financial institutions.

c) Resources needed to manage derivative products

Treasury has limited ability to use derivative products to enhance returns and contain risks. Management has recognized the potential benefits of using these products for some time but is unwilling to do so without the necessary resources.

Both debt management and investment management functions face similar challenges in entering the derivative markets. Equipping the government with the necessary capabilities will require additional resources. Costs can be significant, given the time and money required to define information requirements, establish a credit group, determine pricing and evaluation methodologies, obtain appropriate software and hardware for support systems, and develop the necessary policies and procedures. Entities like B.C. Hydro would also have an interest in having access to such systems to support their analysis and decision making.

We understand that Treasury may already have appropriate front end systems; however, the back office needs similar capabilities to ensure appropriate accounting, management reporting and control. The Investment Branch has already developed a very effective risk management program for its existing portfolios. This program would also require enhancement to include derivatives.

d) Resources needed to manage current investment activity

Treasury has credit exposure to highly rated financial institutions through money market funds, foreign exchange and derivative instruments. Credit risk is also common to the lending activity performed by the ministries and administered by the Loan Administration Branch within Treasury. At present, the government has no formal credit review independent of the decision-making process for lending and investing.

e) Use of commodity hedging

Over the next ten years, a significant proportion of the new energy resources of B.C. Hydro will be derived from natural gas fuel generation. This approach has many system and cost advantages, but it potentially exposes B.C. Hydro to commodity price risk totalling approximately $533 million per annum over the next ten years.

B.C. Hydro is currently reviewing the various methods of managing existing and potential commodity price risk including fuel and gas. The alternatives include straight flow through to rate payers, off-balance sheet pre-paid purchases, long term purchases and hedging by way of commodity derivatives. Commodity derivatives are provided by financial institutions, though B.C. Hydro regards commodity risk as an operating, not a financial matter. Other entities are purchasers of fuel and gas, although in far lesser quantities than B.C. Hydro, and could also benefit from such a program.

B.C. Hydro understands that, in the spring of 1991, Treasury presented the Treasury Board with an outline of commodity hedging using commodity derivatives. Hydro further understands that the Board did not approve the use of commodity derivatives and placed a prohibition on commodity hedging by

ministries and Crowns, with the exception of commodity hedges as arranged through an industrial provider of fuel such as Petro-Canada or Esso. This restriction eliminates B.C. Hydro's ability to use commodity derivatives to manage fuel and gas price risks.

Recommendations

- An evaluation of the use of derivatives should be conducted by Treasury to determine the incremental resources and the cost/benefits of the use of derivatives. This process should include:
  - determination of the type of derivative instruments to use, the nature and scope of their application and the anticipated benefits and costs.
  - definition of user requirements involving all branches or entities.
  - development of policies, procedures, performance measures, management reporting and monitoring and control requirements.
  - selection of appropriate software and hardware, testing and implementation.
- Even if there will be no greater use of derivatives, the government should establish a credit group which reports to the Deputy Minister of Finance. The group should formulate credit and market risk policies and procedures and advise Treasury Board on material issues and situations including those impacting cash, debt and investment transactions.
- The government should initiate a study, with input from all interested parties, into the costs, benefits and risks of using commodity derivatives and the necessary policies, controls and systems required to support such a hedging program.

2. Achieving desired operating results

a) Portfolio management of debt

Treasury currently acts as agent between its clients and the marketplace. When Treasury issues bonds, the timing of the issue is often determined by the needs of the clients it serves, particularly B.C. Hydro. The appetite of international investors for the Province's debt, however, varies over time, as a function of their existing holdings, their perceptions of the economic and political environment in Canada and British Columbia, and trends in exchange and

interest rates in Canada and globally. The timing of a bond issue is critical to minimizing costs and maximizing acceptance by the investment community.

Incremental costs from poor timing can be significant. B.C. Hydro's financing requirements may not coincide with Treasury's view of the optimal timing to tap or access markets. B.C. Hydro claims that it could raise funds more cost effectively by controlling the timing and placement of its own debt. Such activity could, however, conflict with the broader activities of the Province in the market.

Changing from "matched book" to "portfolio" management basis

At present, Treasury manages the Province's debt through a "matched book" – matching the needs of borrowers to the timing and structure sought by investors. When the timing of borrowers' needs does not match investors' needs, an intermediary such as Treasury has difficulty minimizing costs and maximizing acceptance by investors. Therefore, when the needs of borrowers and investors differ, institutions operating in capital markets generally move from a "matched book" to a "portfolio" approach. A portfolio approach allows an intermediary like Treasury to meet the entities' borrowing needs, using derivatives or cash instruments to hedge interest or currency risk exposures until the timing is appropriate to borrow the debt from the marketplace. The intermediary therefore borrows when costs can be minimized and investor acceptance maximized.

Treasury seeks to have the discretionary ability to manage on a "portfolio" basis. By adopting a portfolio approach to managing the province's debt, Treasury can enhance its ability to satisfy an entity's desired timing and financing structure.

Many professional debt managers are moving in the direction of portfolio management. Most banks manage derivatives/debt portfolios in this manner. Portfolio management would enable the debt manager to satisfy client (entity) needs while minimizing yield curve risks and maximizing the opportunity for the province to benefit from more appropriate timing in issuing its debt.

Ramifications of "portfolio" management

Changing to a portfolio management approach has many ramifications for the government:

- Debt managers would have to be given significant discretion to manage this mismatched position.

- All of the Debt Management Branch's operations, information systems and management practices would have to be converted to the "portfolio" approach. When the branch intermediates between

the government and investors, it has to fund the entities' requirements but may need to delay going to market until conditions improve. Effectively managing such situations requires having in place appropriate systems, methodologies, policies, procedures, measurements and controls. In dynamic and volatile markets, debt managers must be able to measure the sensitivity of the value of the debt/derivatives portfolio to changes in interest or foreign exchange rates. Enhanced systems capabilities and an effective performance management system would therefore be required.

- Ideally, the Debt Management Branch should be able to determine the present value of its portfolio periodically during the day to assess the impact of changing markets on its hedge positions. Appropriate information and accounting systems are essential management tools to do this.

- The Debt Management Branch is currently perceived as a zero revenue department. The branch charges fees to its clients to cover costs of processing the transactions. All other "revenues" received to decrease the cost of funds to the clients are distributed appropriately. With the change to portfolio management, the branch would be perceived as a "profit centre", and methods of distributing income to the clients must be determined.

Current information suggests that the "portfolio" approach, if properly researched, planned and executed with the necessary controls, would better enable Treasury to meet the needs of the government and entities like B.C. Hydro in a cost-effective and a low risk manner.

Recommendations

- Consider the use of the portfolio management approach. Accordingly, further study is required to determine the cost/benefit of the portfolio management approach and its full impact on both the Debt Management branch and its clients with respect to the following:

    - systems
    - valuation methods
    - profit disbursement
    - management reporting
    - performance measurement

b) Performance measures

Treasury is responsible for obtaining long term funds for the Province and over 25 other clients including B.C. Hydro, B.C. Transit, B.C. Ferries and

Improvement Districts. Each organization has different requirements and levels of knowledge about the management of its debt.

Treasury must inform each client about liability management techniques and how the marketplace, the current economic environment and the use of new products will affect their cost of funds. The continued development of performance measurement systems will help Treasury to educate and inform each client, including the province, about the management of debt.

Performance measurement systems

The cost of funds is influenced by many factors, the amount required, the use of global markets, new sophisticated trading products available to lower the net cost, and the current weaknesses in the economy. Debt managers need to be able to monitor all factors to ensure that the cost of funds obtained is the lowest possible in the given economic environment. Several other institutions and governments are in the process of developing performance measurement systems. For example, the Province of Ontario is developing performance measures for their liability management portfolios.

Performance measurement systems are a valuable tool in determining the effectiveness of specific decisions and overall strategies. Treasury performs ongoing analysis of the financial markets to determine the best strategies of obtaining funds to meet all clients' needs. These strategies are reviewed by the ADM and the client where necessary. At present, performance measures exist for the short term but not for the long term borrowing programs. Performance measures should look to both short and long term expectations of the clients. A performance measurement system is part of a consolidated support system.

Recommendation

- The Debt Management Branch should continue its requirements analysis of performance measurement systems for the debt management portfolio, completing the work in conjunction with Treasury's clients. This analysis will identify strengths and weaknesses in the current methodologies and form the basis for monitoring the debt management program. The system, when established, should form part of the overall systems in the ministry.

c) Securities lending resources

"Securities Lending" of bonds and equities, an initiative implemented in 1989, has proved successful in generating approximately $1.2 million in annual fee revenue for the funds which are managed by Treasury. This fee income is reconciled by Treasury with each of the lending agents (i.e. banks or trust companies) on a monthly basis, and then redistributed among each of the funds on a pro rata basis.

The use of securities lending to generate fee income to increase the overall yield on investments is an acceptable and prudent practice used by large investors. The securities lending process is important in maintaining liquidity in the marketplace. Although there are inherent risks in this process, the Province has ensured that these risks have been eliminated or minimized.

This important initiative requires various resources such as computer time, systems development and maintenance, and clerical time. The cost of these resources is estimated at several hundred thousand dollars. Approximately 95% of these incremental costs will be for custodial fees. All generated income is deposited to a Special Account, but related expenses are allocated within the budgetary process, not offset in the same account as the income generated. Expenses remain fixed as per the authorized budget. Authorization must be received from Treasury Board staff to book any additional expenditures.

A Treasury Bill lending program has the potential to generate additional fee income (estimated at $200,000) for the funds. Currently, the Branch is waiting for CIBC's final proposal, before proceeding with the Program. Beneficiaries would include the funds managed by the Investment Branch, and WCB. Sufficient resources to implement this program in a timely manner have not been available.

The "securities lending" process generates fee income for both the managed investment funds and the Province with minimal risk. Present internal procedures and controls appear to be sufficient. Current resource levels should, however, be reviewed in order to ensure that other programs are not affected negatively, and to allow not only expansion to include Treasury Bills, but also enhancement and maintenance of the current securities lending program.

Recommendation

- Perform an analysis of the costs and benefits of the securities lending program, including the desired enhancements, as well as an examination of the issue of allocating program expenses against revenues generated.

d) Maximizing efficiency in cash management

Cash flow management is a critical function for the government. Effective and efficient systems and procedures must be in place to ensure that funds are collected and disbursed accurately and on a timely basis. Excess funds must be invested to obtain a maximum return, while any shortfalls must be funded most economically. It is critical that all monies of the government be consolidated to achieve these results. The current practices employed by Treasury are comparable to those in large financial institutions and corporations, but have additional complexity due to the nature of the transactions and other internal procedures or requirements.

The cash flow management process

Treasury manages in excess of $460 billion annually. Daily, weekly and annual cash flow forecasts are produced to ensure that all payment obligations are met and that excess cash is invested to obtain maximum returns. A network of bank accounts and systems is used to facilitate cash concentration and administration. Treasury negotiates, implements and administers bank services through more than 30 financial institutions in 2,500 accounts on behalf of over 100 separate entities including the province. More than 100 legal agreements and 50 systems are involved in this process. The services provided include payment of funds, revenue collection, certificates of approval, bank service negotiation and card services. The costs of the services provided by Treasury are charged back to its clients.

Crown corporations are not fully integrated into the overall cash management program of the Province (e.g. B.C. Hydro, B.C. Rail). Crown corporations manage their own cash flow forecasting activity. Any residual balances are managed by Treasury under the province's "offset interest" program. Potential economies of scale and additional interest revenue have not been realized to the extent possible.

Funds transfers can be effected in many ways, including cash, cheques, drafts, direct deposits, debit and credit cards, and various electronic payment systems. Each method affects cash balances in various ways due to timing differences in the processing cycles. The cash management program must recognize and adapt to changing financial practices, including the use of credit cards (now part of such government operations as highway tolls, museums, bookstores and highway weigh scales), the future introduction of debit cards, and changes to the Bank Act which will work as a disincentive to handling cash and coin.

Developing cash management systems

New technology continues to present opportunities for improvement to cash management by Treasury and all other government bodies. The number of transactions and their dollar amounts is significant meaning small improvements can have a large impact. Improved cash forecasting methodologies and MIS capabilities would benefit Treasury and such major client organizations as B.C. Hydro, Social Services, Finance, Health, ICBC and the Liquor Board.

Recommendations

- Continue to seek out and apply more efficient and cost-effective methods of collecting and disbursing funds
- All cash balances belonging to the government and Crown corporations should be consolidated to obtain the greatest return and economies of scale possible, without sacrificing efficiencies.

e) Foreign investment currency exposure

As a result of its asset diversification strategy, Treasury is increasing its investment in foreign securities. These investments appear to be made prudently, through experienced and established investment management institutions. The foreign currency exposure is, however, not hedged. Without a clear understanding of the investment strategy, the general public might perceive that the government was managing the funds imprudently. A recent example of this type of misperception was the significant publicity which a workers' compensation board in another province received concerning what was perceived as mismanagement due to a significant foreign exchange loss.

We reviewed with management their performance measures and the nature and frequency of management reporting, particularly in relation to risks managed and details analyzed. We are impressed with the standard of detailed analysis involved in monitoring and controlling the risks and performance of funds, and are satisfied with management's understanding and capability of managing the foreign investment exposures.

Management is not unduly concerned over their current proportion of foreign investments. The diversification strategy in foreign investments involves the Teachers, B.C. Rail and B.C. Hydro Pension Funds. At present, 5 per cent of the three trusteed funds are exposed to currency fluctuations, while the maximum exposure permitted by legislation is 16 per cent. The investment staff also includes an experienced foreign currency trader, who monitors the funds exposure. Further, Treasury has conducted extensive research on the implication of foreign investment. The results suggest that, over time, returns could be reduced if foreign currency positions totalling 30% or less of the portfolio were hedged. Thus hedging is not a cost-effective strategy for the current level of investments.

Losses from a foreign investment can, nevertheless, be incurred during the term of an investment, and such losses could be poorly perceived in isolation of the portfolio strategy. This strategy needs to be articulated to interested parties to avoid adverse reactions and pressures to change policies which could prove costly. Examples of potentially controversial investment strategies might include investments involving foreign currencies or the investment of funds outside the province and the country instead of within the province. We understand that those with direct or legal interest have been informed about the portfolio strategy.

Other investment funds have adopted a strategy similar to that of Treasury and, with the relaxation of the foreign investment constraints on managed funds, many will be significantly increasing their exposure.

Recommendation

- ► The government's foreign asset diversification strategy should be communicated on an ongoing basis to interested and informed parties, including members of the new government, to mitigate possible public misperceptions of government policy.

3. Special issues regarding pension funds

a) Fiduciary responsibility

The government has a fiduciary responsibility for the $17 billion of trusteed funds which it manages within pension funds for municipalities, teachers, colleges, B.C. Rail and B.C. Hydro. Fiduciary responsibilities mean that the government must act in the interest of the beneficiaries of the trusteed funds.

To fulfill its responsibilities, Treasury has developed objective performance measures against which it monitors and controls both internally and externally managed funds. An asset/liability study has been completed and is regularly updated for each pension fund to determine the appropriate asset mix for investments. The investment policies are tailored to the liability profile of each of the funds.

The Director of the Investment Branch informs us that no previous government has directed Treasury to invest pension funds into investments which conflicted with the goals of each fund.

b) Investment returns

Treasury monitors the performance of the funds under administration by comparison to three bench-mark indicators. The bench-marks used are:

- the Scotia McLeod Universal Bond Index
- the median performance of private sector managed funds
- the objective of the funds to earn a rate of return three percentage points higher than the rate of increase in the Consumer Price Index.

The funds under administration have performed better over the last five years than the bench-marks by margins of from 1.6%, when compared to private funds, to 26.7%, when compared to CPI plus 3 per cent. That means that the pension funds have earned from $166 to $2,216 million more in the last five years than they would have earned had the funds performed at the level of the bench-mark used.

The unfunded pension liability of over $3 billion is not related to recent poor returns on the funds invested, but the lack of funding from the employer and employees. The establishment of contributions from employees and the employer is under the influence of the Superannuation Commission and the action taken by the employers in response to the funding deficiency.

As to their performance on a cost and debt management the ministry has not been able to provide us with any relevant data concerning its actual performance.

4. Making the best use of the government's Treasury capabilities

a) Overlapping activities in Treasury and entities

Similar functions are currently conducted within the branches of Treasury and other public sector entities. For example, the Investment branch, ICBC and WCB fulfill investment management functions. Similar overlap may exist in the activities of the Debt Management branch and those of B.C. Hydro.

Debt Management Branch and B.C. Hydro

The Fiscal Agency agreement between Treasury and B.C. Hydro identifies the roles and responsibilities that each must assume. Treasury is to coordinate all borrowing requests and act as fiscal agent to secure funds with the most cost-effective methods of financing within identified risk parameters.

B.C. Hydro has expressed a lack of confidence in Treasury's ability to meet its liability management needs and service expectations. Comments highlight an apparent lack of coordination and communication between the organizations. Hydro has therefore supplemented the resources in their treasury area in order to ensure that markets are reviewed and monitored to their satisfaction and to provide adequate input to the decision-making process.

This "duplication" of resources by B.C. Hydro may be counter to the interests of the government as a whole. Placing more resources in a specific entity restricts the benefit only to that entity. Strengthening the treasury function in Treasury should provide a more cost-effective solution by extending the potential benefit to many clients.

Investment Management Branch, ICBC and WCB

At present, the Investment Branch of Treasury, WCB and ICBC have similar investment management functions. The Branch manages a $14.2 billion in funds, WCB $3.7 billion and ICBC $2.9 billion. The Director

of the Branch acts as a policy advisor to WCB but has no involvement from an advisory or management perspective in ICBC.

The funds are managed with different objectives. They each focus on maximizing returns, at pre-determined levels of risk, in different ways. With increased diversification in asset mix and use of derivative instruments, to enhance yield and minimize risk, a need will emerge for greater specialization. In view of this and the similarity of roles in the Investment Branch, WBC and ICBC, there could be opportunities to enhance overall efficiency and effectiveness through combining the functions within Treasury.

Recommendations

- The government should initiate a study into ways in which the treasury functions can be prudently centralized to reduce costs and capitalize on specialized expertise.

b) Consolidation of administrative functions in Treasury

At present, three branches within Treasury – Investments, Debt Management and Banking and Cash Management – operate administrative units. Management of these branches have ongoing concerns about their ability to fulfill the branches' mandates with current resource levels. Their concerns appear to be shared by their clients.

Combining administrative functions is an approach which could free up some resources, thereby creating capacity within existing budgets to re-deploy staff. Many treasury operations have a separate unit which is accountable for all administrative activities.

Recommendation

- Integrating the administrative functions within Treasury should be a subject of further study to properly determine, in detail, the advantages, disadvantages and cost/benefits.

5. Capacity constraints

a) Need for additional personnel

Provincial Treasury recently conducted an in-house survey of its clients. Most expressed satisfaction with the level of service; however, WCB and B.C. Hydro are not satisfied with the level of service provided for the fees paid. For example, WCB waits two to three weeks for the Banking and Cash Management Branch to produce the general ledger reports. WCB would also like to use derivative products, but Treasury is not able to support the activity at

this time. B.C. Hydro has hired additional staff to do market research and analysis because of staffing and systems limitations in the Debt Management Branch.

Treasury appears to have insufficient resources to meet workload demands from clients and keep pace with changes in markets and products. Treasury is unable to manage its responsibilities as effectively and efficiently as management would wish, given adequate resources. Each branch director considers the trends in staffing levels versus workload demands to be a risk because of the specialized expertise required and the difficulty in finding qualified replacements. Treasury cannot offset the expenses which it would incur in acquiring additional resources against related revenues. This practice not only inhibits its ability to meet the needs of its clients and the government but also means that Treasury cannot invest money to make money.

Recommendations

- The ministry should develop a method of budgeting which would allow increases in costs in situations where more revenue would be earned as a result of the new expenditures.

b) Need for enhanced systems support for Treasury function

The systems (policies, procedures, software and hardware) within Treasury are increasingly inadequate to cope with the expanding demands and complexity of the debt and investment activities. Management has been attempting to upgrade the existing systems, but current project lists for system enhancements extend well beyond the next 24 months time frame. Because of the importance of systems to monitor activities and respond to the use of new products or techniques, management will be unable to keep pace with up-to-date treasury management approaches. Returns on investments could suffer and the best borrowing arrangements not be made.

Further complicating Treasury's position is the tendency of its clients, when they have concerns about Treasury's ability to meet their requirements, to develop or install systems internally or to source other external systems to support their needs. The entity's capabilities are enhanced, but there is a growing duplication of resources.

Recommendations

- A comprehensive system hardware and software plan should be developed and priority given to implementation of those units judged most important to limit risk and improve efficiency of both Treasury and its clients.

- A disaster recovery plan for Treasury should be developed, including phone lines, paper files and building access.

D. Summary of Recommendations

Managing and Controlling Financial Risk

a) **Use of Derivative Products in Debt Management**

b) **Use of Derivative Products in Investment Management**

c) **Resources needed to manage derivative products**

d) **Resources needed to manage current investment activity**

e) **Use of commodity hedging**

Recommendations

- An evaluation of the use of derivatives should be conducted by Provincial Treasury to determine the incremental resources and the cost/benefits of the use of derivatives. This process should include:
  - determination of the type of derivative instruments to use, the nature and scope of their application and the anticipated benefits and costs;
  - definition of user requirements involving all branches or entities,
  - development of policies, procedures, performance measures, management reporting and monitoring and control requirements;
  - selection of appropriate software and hardware, testing and implementation.
- Even if there will be no greater use of derivatives, the government should establish a credit group which reports to the Deputy Minister of Finance. The group should formulate credit and market risk policies and procedures and advise Treasury Board on material issues and situations including those impacting cash, debt and investment transactions.

- The government should initiate a study, with input from all interested parties, into the cost benefits and the risks of using commodity derivatives and the necessary policies, controls and systems required to support such a hedging program.

Achieving desired operating results

Recommendations

- Consider the use of the portfolio management approach. Accordingly, further study is required to determine the cost/benefit of the portfolio management approach and its full impact on both the Debt Management branch and its clients with respect to the following:

    - systems
    - valuation methods
    - profit disbursement
    - management reporting
    - performance measurement

b) Performance measures

Recommendation

- The Debt Management Branch should continue its requirements analysis of performance measurement systems for the debt management portfolio, completing the work in conjunction with Treasury's clients. This analysis will identify strengths and weaknesses in the current methodologies and form the basis for monitoring the debt management program. The system, when established, should form part of the overall systems in the ministry.

c) Securities lending resources

Recommendation

- Perform an analysis of the costs and benefits of the securities lending program, including the desired enhancements, as well as an examination of the issue of allocating program expenses against revenues generated.

d) Maximizing efficiency in cash management

Recommendations

- Continue to seek out and apply more efficient and cost effective methods of collecting and disbursing funds

- All cash balances belonging to the government and Crown corporations should be consolidated to obtain the greatest return and economies of scale possible, without sacrificing efficiencies.

e) Foreign investment currency exposure

Recommendation

- The government's foreign asset diversification strategy should be communicated on an ongoing basis to interested and informed parties, including members of the new Government, to mitigate possible public misperceptions of government policy.

Making the best use of the government's Treasury capabilities

Recommendations

- The government should initiate a study into ways in which the Treasury functions can be prudently centralized to reduce costs and capitalize on specialized expertise.

- Integrating the administrative functions within the Provincial Treasury should be a subject of further study to properly determine, in detail, the advantages, disadvantages and cost/benefits.

Capacity Constraints

Recommendations

- The ministry should develop a method of budgeting which would allow increases in costs in situations where more revenue would be earned as a result of the new expenditures.

- A comprehensive system hardware and software plan should be developed and priority given to implementation of those units judged most important to limit risk and improve efficiency of both the treasury and its clients.

- A disaster recovery plan for Treasury should be developed, including phone lines, paper files and building access should be initiated.